

ABSTRACT

A spectrum analysis engine (SAGE) that comprises a spectrum analyzer component, a signal detector component, a universal signal synchronizer component and a snapshot buffer component. The spectrum analyzer component generates data
5 representing a real-time spectrogram of a bandwidth of radio frequency (RF) spectrum. The signal detector detects signal pulses in the frequency band and outputs pulse event information entries output, which include the start time, duration, power, center frequency and bandwidth of each detected pulse. The signal detector also provides pulse trigger outputs which may be used to enable/disable the collection of information by the
10 spectrum analyzer and the snapshot buffer components. The snapshot buffer collects a set of raw digital signal samples useful for signal classification and other purposes. The universal signal synchronizer synchronizes to periodic signal sources, useful for instituting schemes to avoid interference with those signals.

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